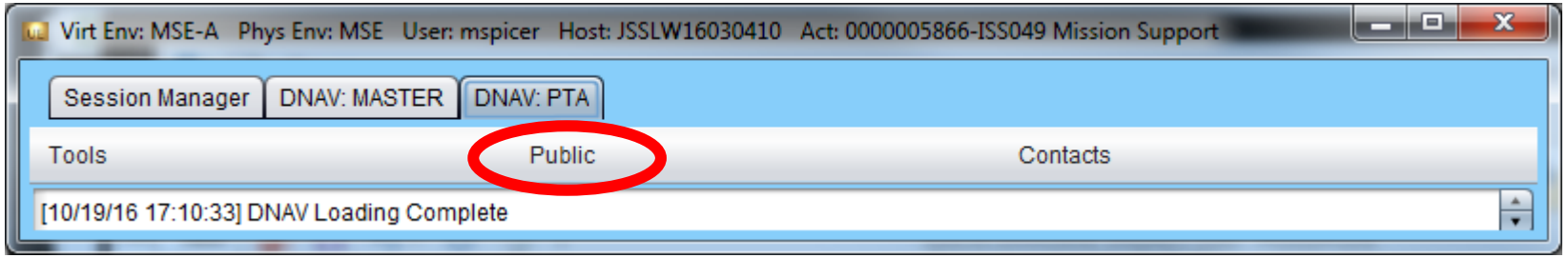
SpaceCom Conference 2016
MCCS Demo

MCC Displays submitted for Export Control Clearance

20 October 2016

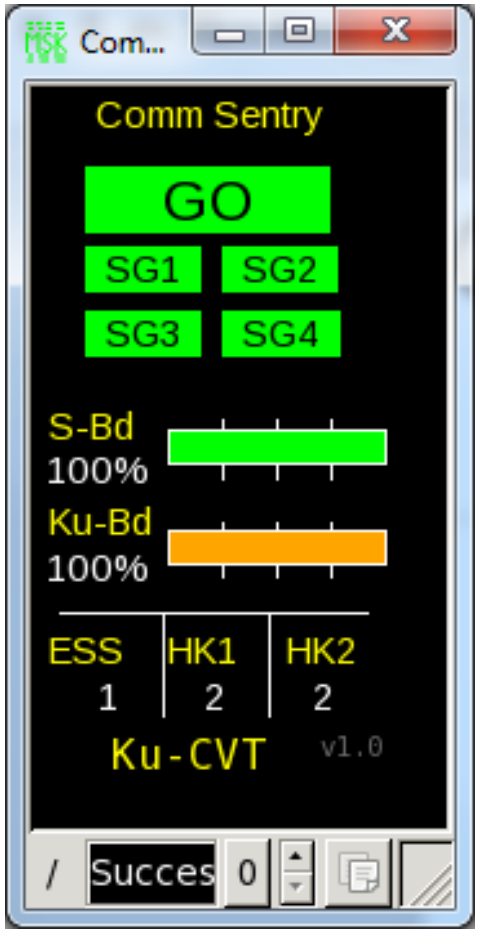
Overview

- All displays descend originally from the ISS PTA User Experience Public menu.

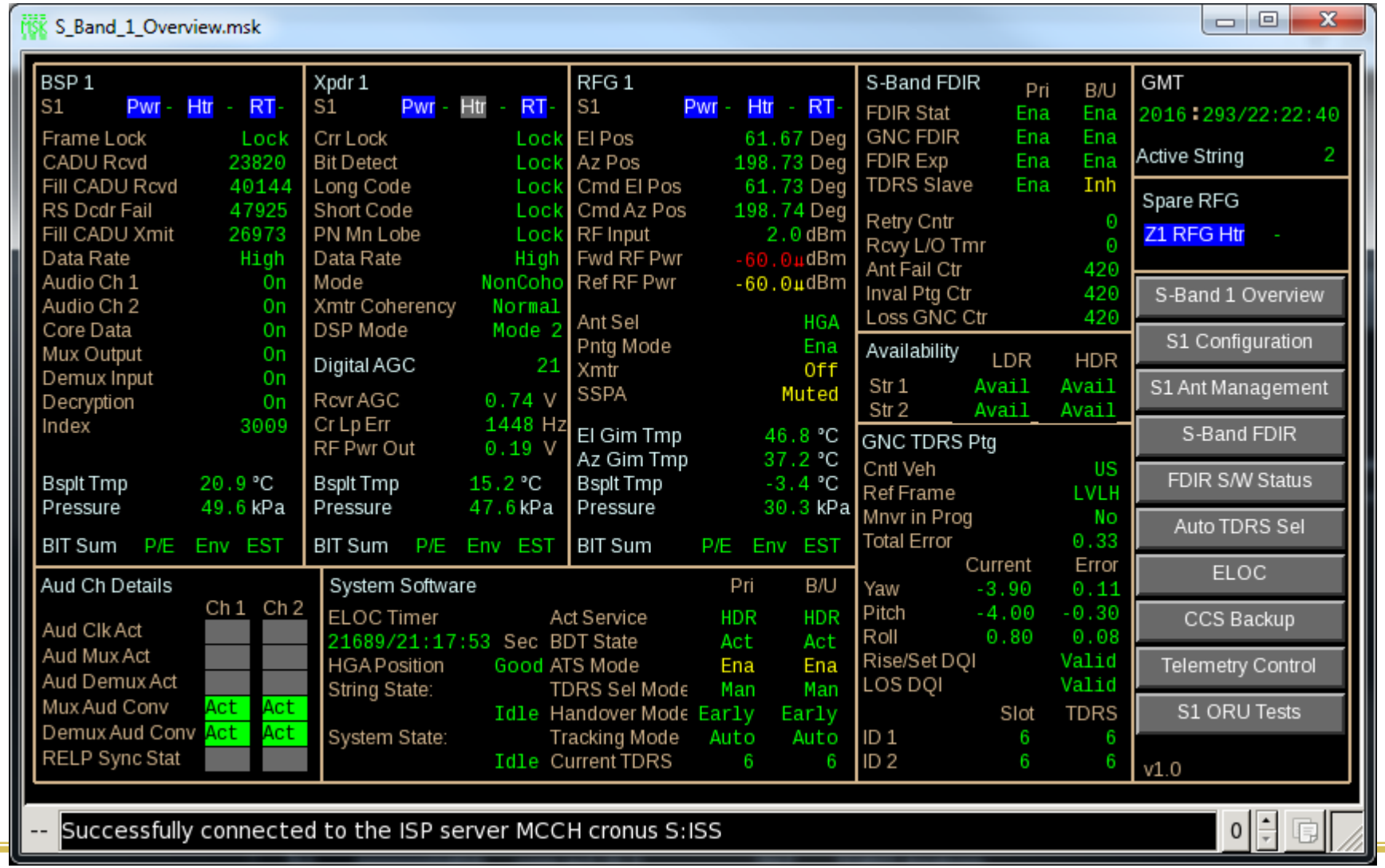


- Displays selected from CRONUS (5 displays), ETHOS (9) and SPARTAN (9) console positions
- Only MDT Tabular and Plot displays selected with the exception of the CRONUS IAM display
  - Items that are designated with "*" prior to their name were previously submitted for export for the SpaceOps 2010 Conference and are the current versions of those same displays
    - DAA 20155 was submitted for that export request

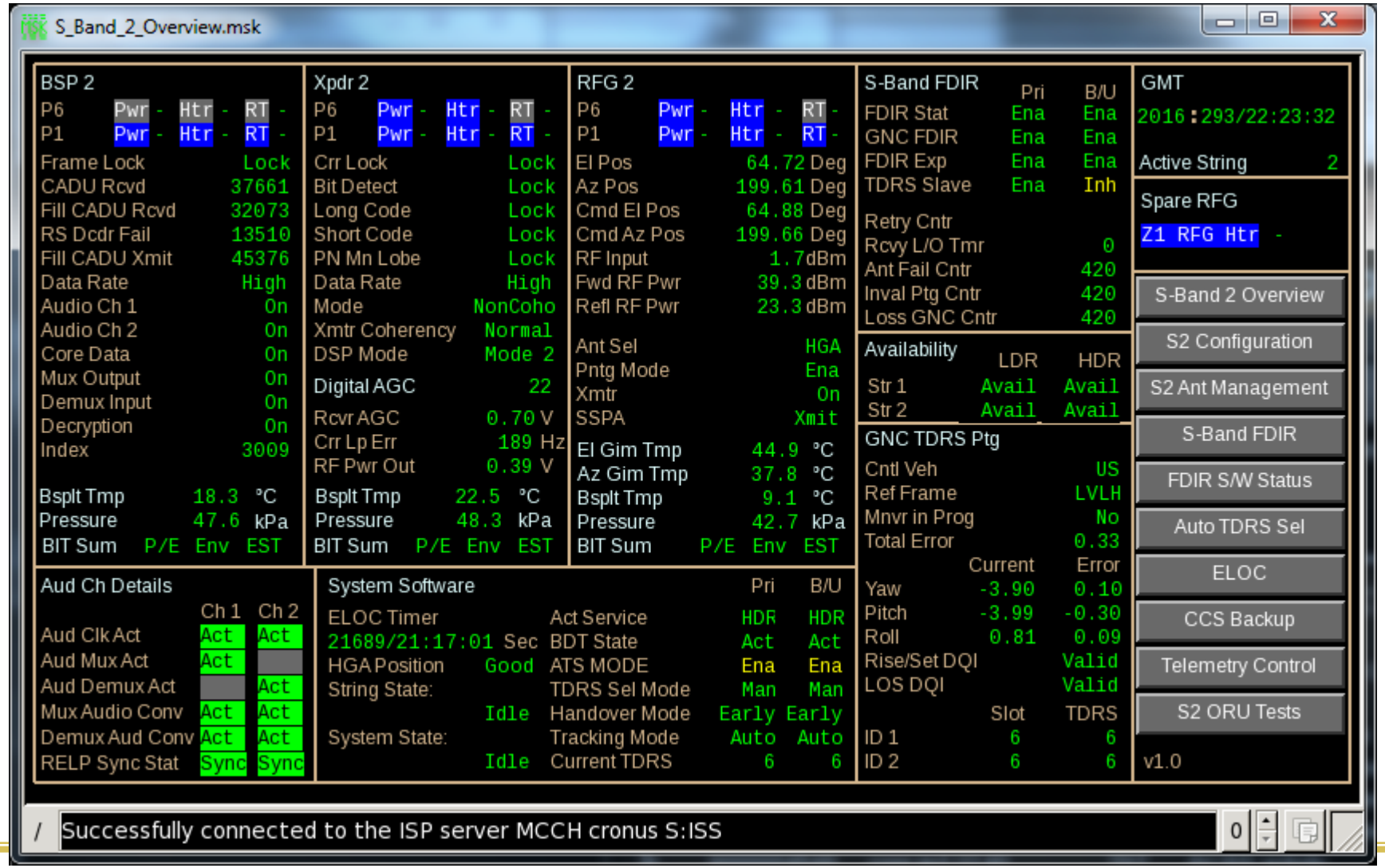
*CRONUS -> Comm Sentry



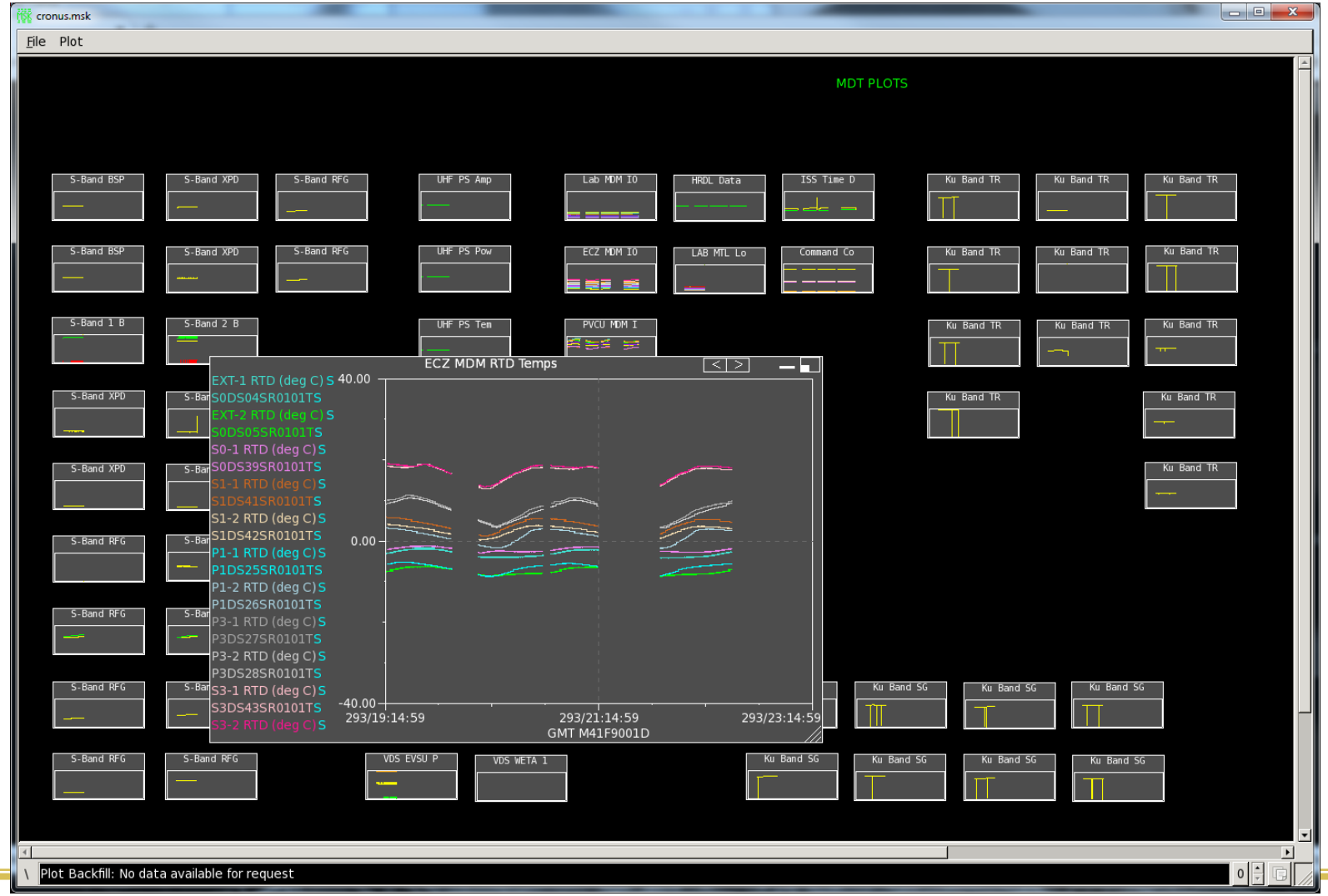
*CRONUS -> Displays -> C&T MSKS -> S-Band 1 Overview



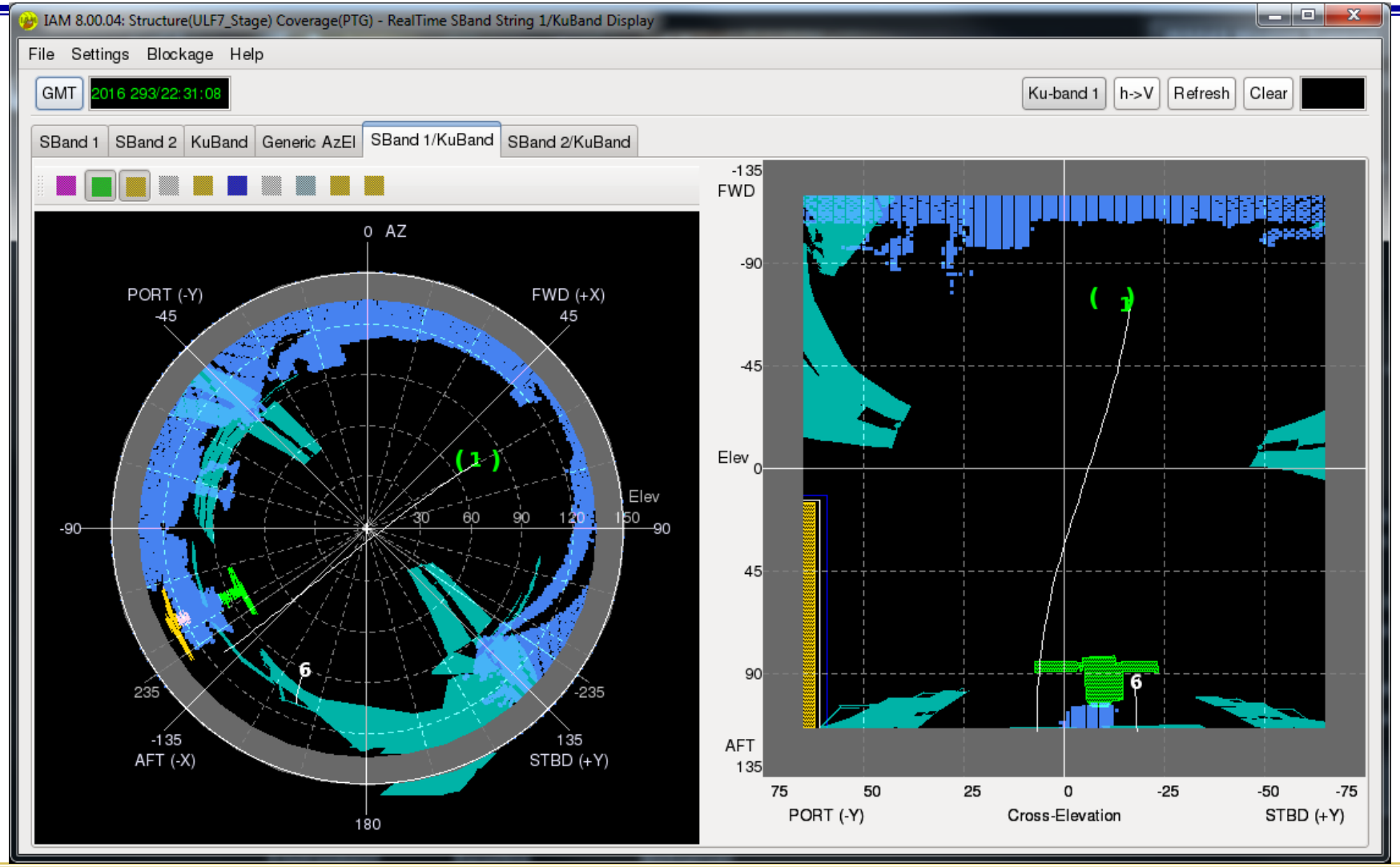
*CRONUS -> Displays -> C&T MSKS -> S-Band 2 Overview



*CRONUS -> Displays -> MDT Plots -> CRONUS

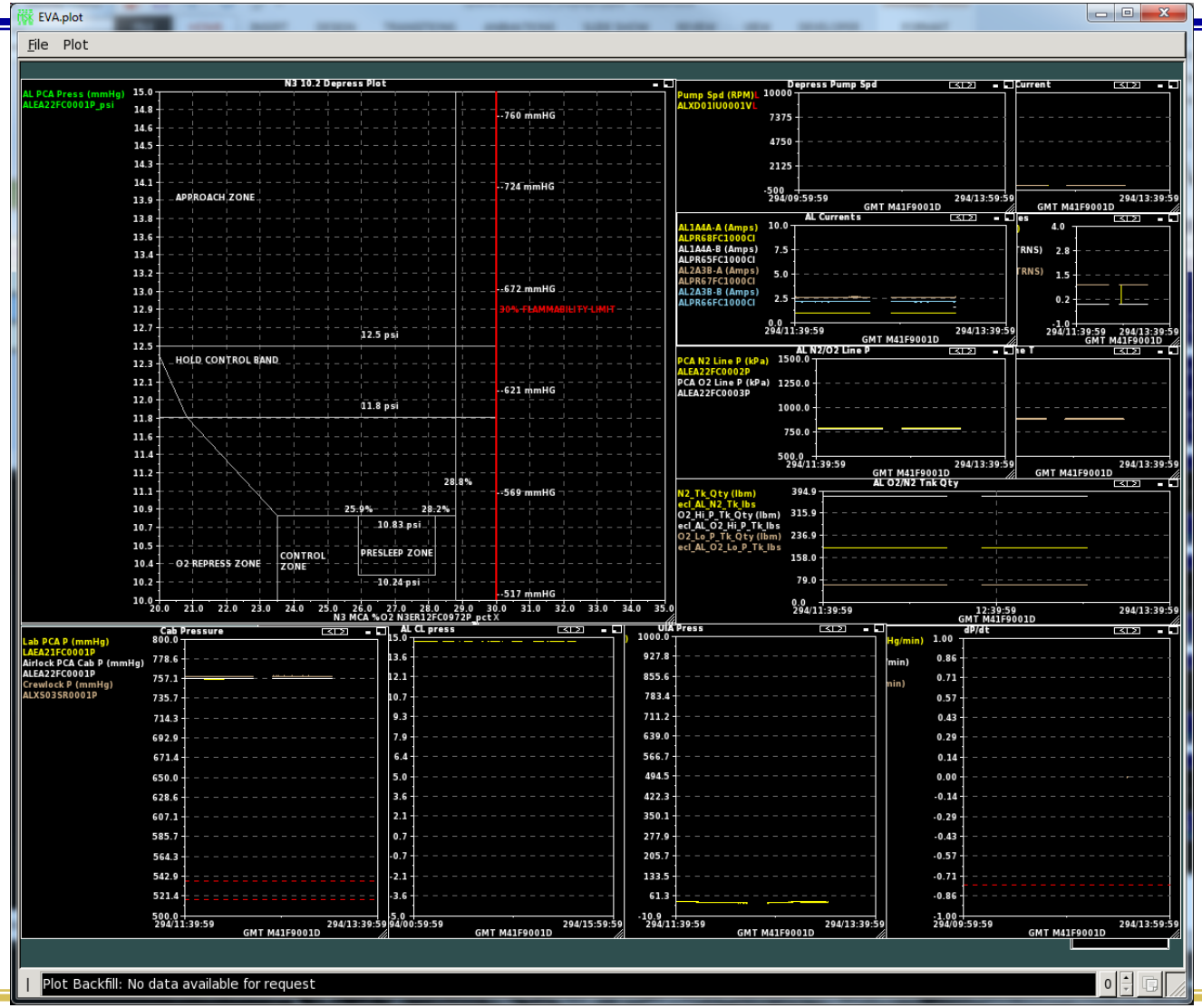


*CRONUS -> IAM

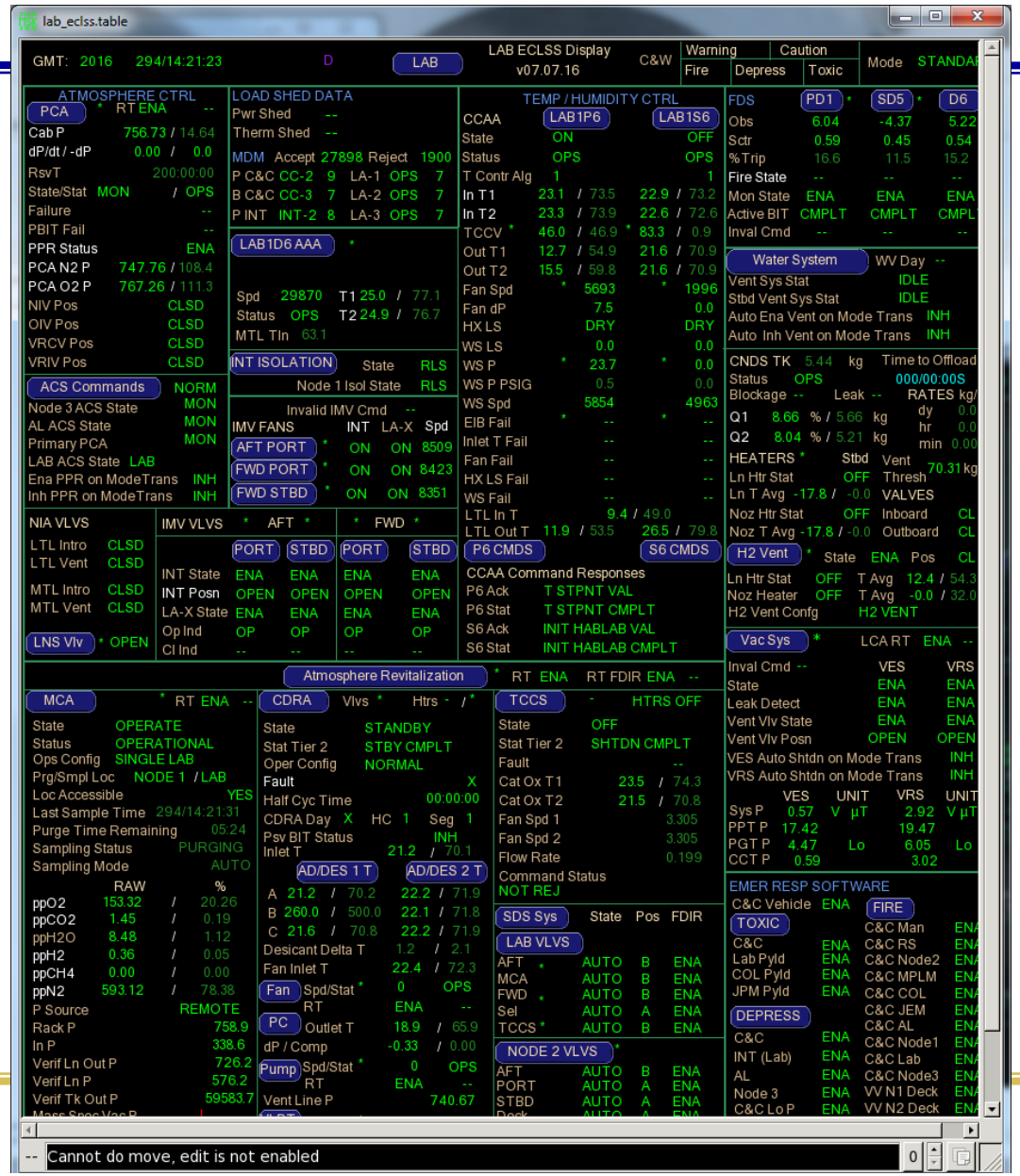

IAM 8.00.04: Structure(ULF7_Stage) Coverage(PTG) - RealTime SBand String 1/KuBand Display
File Settings Blockage Help
GMT
2016 293/22:31:08
Ku-band 1
h->V
Refresh
Clear
SBand 1
SBand 2
KuBand
Generic AzEl
SBand 1/KuBand
SBand 2/KuBand
0 AZ
PORT (-Y)
-45
FWD (+X)
45
-90
90
Elev
30
60
90
120
150
235
-235
-135
AFT (-X)
135
STBD (+Y)
180
-135
FWD
-90
-45
Elev
0
45
90
AFT
135
75
50
25
0
-25
-50
-75
PORT (-Y)
Cross-Elevation
STBD (+Y)

*ETHOS-> MDT PLOTS-> Overview-> Overview

*ETHOS-> MDT PLOTS-> Overview-> EVA & Transfer



*ETHOS-> MDT Table-> Modules-> Lab



*ETHOS-> MDT Table-> Modules-> Node1

node_1_eclss.table

Node 1 ECLSS Display v.11.20.15

GMT: 2016 294/14:23:30 Print D

NODE 1 Station Mode STANDARD

ATMOSPHERE CONTROL

Cab P	756.61 / 14.63	?
Pressure Limiting	INH	
LL / UL Viol	-- / --	

TEMP / HUMIDITY CONTROL

CABIN FAN *

State	ON
Speed	3863
dP	3.92
Speed Limiting	ENA
Failure	--

IMV FANS ?

	INT	NCS	Spd
AFT PORT *	ON	ON	8441
STBD AFT *	ON	ON	8530

FIRE DETECTION

MDM FDIR	N1-1	N1-2
NCS Fire Isol State	INH	INH
NCS IMV FDIR State	ENA	ENA
NCS Isolation State	RLS	RLS

INT ISOLATION State RLS

INT Invalid IMV Cmd --

SMK DET ?	SD1 *	SD2 *
Obscuration	-6.81	13.31
Scatter	0.63	0.89
Pct Trip	15.9	27.0
Fire State	--	--
Mon State	ENA	ENA
Lens Contam	CLEAN	CLEAN
Active BIT	CMPLT	CMPLT
Active BIT Fail	--	--
PBIT / Sctr Fail	-- / --	-- / --
Inval Cmd	--	--

IMV VLVS	* AFT *		* PORT *		DECK -	* STBD *		* FWD *	
?	PORT	STBD	AFT	FWD	AFT	AFT	FWD	PORT	STBD
INT State	ENA	ENA	ENA	ENA	INH	ENA	ENA	ENA	ENA
INT Posn	OPEN	CLSD	OPEN	OPEN	UNK	OPEN	CLSD	OPEN	OPEN
NCS State	ENA	ENA	ENA	ENA	INH	ENA	ENA	ENA	ENA
NCS Posn	OPEN	CLSD	OPEN	OPEN	INH	OPEN	CLSD	OPEN	OPEN
Open	OP	--	OP	OP	--	OP	--	OP	OP
Closed	--	CL	--	--	--	--	CL	--	--

RAMV	State	Vlv Posn	% Open	Rheo Posn	% Cool	Failure ?
NODE 1 *	ENA	81.6	97.1	308.5	90.4	--

SDS VLVS	INT State	Posn	A Ind	B Ind	FDIR ?
Stbd	AUTO	B	--	X	ENA
Fwd *	AUTO	B	--	X	ENA
Sel	AUTO	B	--	X	ENA
Port *	AUTO	A	X	--	ENA
Deck *	INH	UNK	--	--	INH

SPECIAL COMPS

Node Avg Shell T (F) 72.5

	Primary	Secondary	Command Counters	
MDM ID	N1-2	N1-1	Accept	27911
Major State	PRIM	SEC	Reject	1900
Frame Counter	78	78		

RS Isol State	RLS		
Lab Isol State	RLS		
AL Isol State	RLS		
MPLM Isol State	RLS		

NCS C&W	Warning	Caution
	Fire	Depress	Toxic

Successfully connected to the ISP server MCCH ethos S:

*ETHOS-> MDT Table-> Modules-> Node 2

node_2_eclss.table

Print | NODE 2 | v.07.14.14

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PMA2 P/Last 740.8 / D
PMA2 T/Last 21.3 / D
Node 2 Fwd Hatch dP -0.32

ATMOSPHERE CONTROL

Cab P 754.69 / 14.60
Press Limiting INH Avg T 22.2

CCAA | CCAA Cmds

State	On	
Status	OVRD	
T Contr Alg	1 Set	22.0
In T1	22.1	/ 71.8
In T2	22.3	/ 72.1
TCCV *	27.4	/ 70 %
Out T1	13.3	/ 55.9
Out T2	11.3	/ 52.3
Fan Spd *	3973	
Fan dP	4.4	
HX LS	Dry	
WS LS	0.0	
WS P *	0.0	
WS P PSIG	0.0	
WS Spd	5950	
EIB Fail *	--	
Inlet T Fail	--	
Fan Fail	--	
HX LS Fail	--	
WS Fail	--	
TWMV Out	7.9	/ 9.4 / 49.0
Ack	T STPNT VAL	
Stat	T STPNT CMPLT	

LTL	Open	Closed
HX FCV	X	--
Bypass FCV	--	X

Station Mode STANDARD

FIRE DETECTION

INT ISOLATION State RLS
INT Invalid IMV Cmd --

SMK DET	SD1 *	SD2 *
Obscuration	8.24	2.20
Scatter	0.52	0.58
Pct Trip	15.1	15.8
Fire State	--	--
Mon State	ENA	ENA
Lens Contam	CLEAN	CLEAN
Active BIT	CMPLT	CMPLT
Active BIT Fail	--	--
PBIT / Sctr Fail	--	--
Inval Cmd	--	--

SDS *	State	Posn	A	B	FDIR
AFT	AUTO	B	--	X	ENA
PORT	AUTO	A	X	--	ENA
STBD	AUTO	A	X	--	ENA
Ovhd/Deck	AUTO	A	X	--	ENA

IMV FAN		INT State	RPM	INT RPM
FWD STBD	-	OFF	8499	9887

RAMV	State	Vlv Posn	Rheo Posn
	* INH	3.9	66.3

IMV VLVS	* AFT *		* PORT *		- DECK -		* STBD *		- FWD *		- OVHD -	
	PORT	STBD	AFT	FWD	AFT	FWD	AFT	FWD	PORT	STBD	AFT	FWD
INT	ENA	ENA	ENA	ENA	INH	INH	ENA	ENA	INH	ENA	INH	INH
N2-x	ENA	ENA	ENA	ENA	INH	INH	ENA	ENA	INH	ENA	INH	INH
Posn	OP	OP	OP	OP	UNK	UNK	CL	OP	UNK	CL	UNK	UNK
Op	OP	OP	OP	OP	--	--	--	OP	--	--	--	--
Cl	--	--	--	--	--	--	CL	--	--	CL	--	--

CREW QUARTERS

CQ1 (Deck) *	Fan Controller	ON	CQ3 (Port) *	Fan Controller	ON
CQ2 (Stbd) *	Fan Controller	ON	CQ4 (Ovhd) *	Fan Controller	ON

			Cmd Counters			
N2-1	27	OPS	Accept 27911	Warning	Caution	
N2-2	27	OPS	Reject 1900	Fire	Depress	Toxic

-- Successfully connected to the ISP server MCCH ethos S:

*ETHOS-> MDT Table-> Modules-> Node 3

node_3_eclss.table

GMT: 2016 294/14:26:18 D NODE 3 Node 3 ECLSS Display v.07.07.16 C&W Warning Caution Fire Depress Toxic Station Mode STANDARD

ATMOSPHERE CTRL
PCA * RT ENA --
Cab P 756.84 / 14.64
dP/dt / -dP -0.01 / 0.0
RsvT 200:00:00
State/Stat MON / OPS
Failure --
PBIT Fail --
PPR Status ENA
PCA N2 P 776.63 / 112.6
PCA O2 P 787.40 / 114.2
NIV Pos CLSD
OIV Pos CLSD
VRCV Pos CLSD
VRIV Pos CLSD

ACS Commands NORM
Node 3 ACS State MON
AL ACS State MON
LAB ACS State MON
Primary PCA LAB
Ena PPR on ModeTrans INH
Inh PPR on ModeTrans INH

A4 AAA * MTL In 63.2 TEMP / HUMIDITY CTRL
Spd 29848 T1 26.6 / 79.9
Status OPS T2 26.6 / 79.9
MCA Safing LOC ENA Power ENA

A5 AAA *
Spd 25891 T1 21.0 / 69.8
Status OPS T2 21.1 / 70.0

D5 AAA *
Spd 38861 T1 22.3 / 72.1
Status OPS T2 22.3 / 72.2

RAMV * State ENA Vlv 40.9 Rheo 256.7

IMV FANS	HCS	N3-X	Spd	FDIR
STBD OVHD *	ON	ON	8559	ENA
STBD DECK *	ON	ON	8505	ENA
AFT PORT *	ON	ON	8382	ENA
DECK STBD *	ON	ON	8382	ENA
PORT FWD -	OFF	OFF	7162	ENA

Node 3

CCAA CCAA CMDS
State ON
Status OVRD
T Contr Alg 1 Set 22.0
In T1 22.1 / 71.7
In T2 22.0 / 71.6
TCCV * 29.2 / 67.6
Out T1 13.1 / 55.5
Out T2 10.8 / 51.5
Fan Spd * 5142 dP 6.3
HX LS DRY
WS P 480.4 / 9.3
WS Spd * 5864 WS LS 0.0
EIB Fail * --
Inlet T Fail --
Fan Fail --
HX LS Fail --
WS Fail --
LTL In T 8.2 / 46.9
Ack RD ANLG VAL
Stat RD ANLG CMPLT

IMV ISOLATION Node 3 Isol RLS
Nod 1 Isol RLS Nod 3 Stbd Isol RLS
MDM Accept 27913 Reject 1900
P HCS HCS-2 57 N3-1 OPS 46
B HCS HCS-1 76X N3-2 OPS 46
HCZ RTs

Emer Resp Software
OGA ENA PMM ENA
SDS Vlvs ENA Ext Vents ENA
Rack Power ENA UPA ENA
WPA ENA IMV ENA
CCAA ENA

FDS	SD1 *	SD2 *	A4 *	A5 *	D5 *	F5 *
Obs	4.79	5.80	10.13	4.00	4.37	0.64
Sctr	0.64	0.65	0.47	0.52	0.52	0.51
%Trip	17.9	18.3	14.0	14.5	14.5	13.9
Mon State	ENA	ENA	ENA	ENA	ENA	ENA
Active BIT	CMPLT	CMPLT	CMPLT	CMPLT	CMPLT	CMPLT
Inval Cmd	--	--	--	--	--	--

A5 Rack RPC * RT ENA --
D4/D5 Rack RPC * RT ENA --

NIA VLVS
LTL Intro * CLSD
LTL Vent * CLSD
MTL Intro * CLSD
MTL Vent * CLSD

IMV VLVS	* STBD *		PORT *	DECK *	* FWD *		* AFT *	
	OVHD	DECK	FWD	STBD	STBD	PORT	STBD	PORT
HCS Posn	OPEN	OPEN	CLSD	OPEN	OPEN	CLSD	OPEN	OPEN
N3-X State	ENA	ENA	ENA	ENA	ENA	ENA	ENA	ENA
Op Ind	OP	OP	--	OP	OP	--	OP	OP
Cl Ind	--	--	CL	--	--	CL	--	--

OGA * RT ENA --
PSM Pwr * Housekeeping *
Proc Cmd Status PROCESS
Proc Ctrl Status DELIVER
Heartbeat 60007
N2 Ctrl Status HOLD
Feedwater Ctrl Status READY
Dome Ctrl Status DELIVER
ABIT 1 OFF Safing ENA
ABIT 2 OFF
O2 Prod 3.23 kg/dy 7.13 lb/dy
H2O Use 3.63 kg/dy 8.00 lb/dy
PSM Stat ENA Contactor Pos CLSD
Voltage 46.70 Ctrl Current 16.20
Avg Cell V 1.70 Cell Curr 16.20
N2 Purge P 3961.36 Purge Vlv DELIVER
Outbd Vlv CLSD Inbd Vlv CLSD
Water In P 651.61 Feed Vlv FEED
Inlet Vlv CLSD Outlet Vlv CLSD
Stack Contactor Pos CLSD
H2 & H2O P 1220.47 T 18.94
RSA Spd 1536 Ovrd Stat QTY
RSA H2 dP 1 80.68
RSA H2 dP 2 80.68
RSA Qty 493.25 Fill Limit 439.17
H2 Out P 11.74
Dome Abs P -5.17
Dome Vac P1 5.69 P2 5.90
H2 Feed P 67.23
RSA H2 Vlv OPEN H2 Feed Vlv CLSD
H2 Outlet Vlv OPEN Dome Vlv CLSD
Pump Spd 1999 Pump Flow 244.89
Ovrd Stat FLOW
Pump dP -186.17
Flow dP 1 148.94 dP 2 137.56
O2 Out P 755.04 O2 Htr T 35.50
O2 Inbd Vlv OPEN Outbd Vlv OPEN
ppH2 1 1155.00 2 133.00 3 188.00

H2 Vent * State ENA Pos OP
Vent Heater OFF T Avg 17.0 / 62.6

WPA * Fault X RT ENA --
Cmd Status STANDBY
Proc Step HEATUP
Heartbeat 65247
Receive Status RECEIVE Safing ENA
WW Ctrl Qty 15.5 % / 7.3 kg
RATES L/day Cond 2.2 Urine 3.6
MLS In P 67.2 MLS Out P 62.1
Process Pump Spd 2
O2 P1 780.9 O2 P2 5973.1
Hi P1 1303.2 Hi P2 1260.8
Preheater Avg T 55.7 / 132.2
Cat React T 95.8 / 204.5
Gas Sep Avg T 60.0 / 140.0
WS Selector Vlv RECYCLE
WS Ctrl Qty 53.6 % / 29.9 kg
WD Ctrl Press 1305.3 Qty 8.5 kg
Deliver Status DELIVER

UPA * RT ENA --
Current State SHUTDOWN
Previous State SHUTDOWN
Vlv Posn Desc DRYDOWN
Heartbeat 57149
Urine Bus Unavailable - Safing ENA
Buffer Lock -- Error Count 44
WSTA Cntrl Qty 38.0 % / 4.9 kg
Mass Flow lbm/hr 0.0
Feed Processed 0.00 L
RFTA Status FULL
FCPA Pump State OFF Spd 3
Conductivity K1 244.0
FCPA Housing Press P5 49.0
DA Motor Spd 0 Current 0.0
Centrifuge Cntl Spd S4 2.00
Inlet/ Cond P P15/ P16 43 / 43
Comp Out T1 19.44
PCPA Pump State OFF Spd 14
PCPA Motor Current 0.0
PCPA Housing Press P3 46.0

Degraded MTL Safing Time Remaining

MCA - RT INH --
State IDLE
Status STRTUP FAIL
Ops Config SINGLE LAB
Prg/Smpl Loc NODE 3 AIRLK
Loc Accessible YES
Last Sample Time 286/16:24:47
Purge Time Remaining 00:00S
Sampling Status SAMPLINGS
Sampling Mode AUTOS

	RAW		%
ppO2	156.22X	/	20.59X
ppCO2	1.88X	/	0.25X
ppH2O	9.34X	/	1.23X
ppH2	0.00X	/	0.00X
ppCH4	0.00X	/	0.00X
ppN2	591.11X	/	77.93X

P Source REMOTE
Rack P -0.0
In P -0.2
Verif Ln Out P 0.7
Verif Ln P -0.9
Verif Tk Out P -4.2
Mass Spec Vac P 760.20931

Atmosphere Revitalization * RT ENA RT FDIR ENA --

CDRA Vlvs * Htrs * / *
State OPERATE
Stat Tier 2 STRTUP CMPLT
Config NORMAL Fault --
Half Cyc Time 02:23:58
CDRA Day X HC 1 Seg 3
Psv BIT Status ENA
Inlet T 11.2 / 52.2

	AD/DES 1 T		AD/DES 2 T	
A	202.0	/ 395.6	16.1	/ 61.1
B	208.4	/ 407.2	16.0	/ 60.8
C	206.7	/ 404.0	15.5	/ 60.0

Desicant Delta T 26.8 / 80.3
Fan Inlet T 38.1 / 100.5
Fan Spd/Stat * 114705 OPS
Fan RT ENA -- Fault --
PC Outlet T 9.9 / 49.8
dP / Comp 34.06 / 32.22
Pump Spd/Stat * 0 OPS
Pump RT ENA -- Fault --
Vent Line P -7.33

TCCS * HTRS ON
State FULL UP
Stat Tier 2 OPS CMPLT
Fault --
Cat Ox T1 381.7 / 719.0
Cat Ox T2 378.9 / 714.0
Fan Spd 1 4.726
Fan Spd 2 4.694
Flow Rate 1.274
Command Rejected Status NOT REJ

SDS Sys State Pos FDIR
Node 3 Vlvs * NOT ISO
AFT AUTO B ENA
MCA AUTO A ENA
STBD AUTO B ENA
ROUTE AUTO A ENA
CABIN AUTO A ENA
TCCS * AUTO B ENA
NODE 1 VLVS
STBD * AUTO B ENA

Successfully connected to the ISP server MCCH ethos S:

*ETHOS-> MDT Table-> Modules-> Airlock

airlock.table

Airlock ECLSS Display v.07.16.14

GMT: 2016 294/14:25:22

Print | C&W | Warning | Caution | Fire | Depress | Toxic

D | AIRLOCK | Station Mode STANDARD

ATMOSPHERE CONTROL

PCA * RT ENA --

EL P	756.94 / 14.64	Campout	NO
CL P	759.53 / 14.69	Node 3 ACS State	MON
dP/dt / -dP	0.00 / 0.0	AL ACS State	MON
Rsrv T	200:00:00	LAB ACS State	MON
State/Stat	MON / OPS	Prim PCA	LAB
Failure	--		
PBIT Fail	--		
PPR Status	INH		
PCA N2 P	794.8 / 115.3		
PCA O2 P	776.0 / 112.5		

ACS Commands

	Fan	Sblm P
NIV Pos CLSD	EMU1 M	M
OIV Pos CLSD	EMU2 M	M
VRCV Pos CLSD	EMU3 M	M
VRIV Pos CLSD	EMU4 M	M

NITROGEN SYSTEM Lbs 192.16

N2 Supply P	9869.8	/ 1431.45
N2 Supply Tank T	25.3	/ 77.5
N2 Sply Vlv *	CLSD	
N2 Supply Line T	26.0	/ 78.8

OXYGEN SYSTEM Lbs Hi / Lo 376.03 / 61.56

O2 Hi P Sply P	15598.3	/ 2262.26
O2 Hi P Sply Tank T	25.2	/ 77.4
O2 Hi P Sply Vlv *	CLSD	
O2 Hi P Sply Line T	25.5	/ 77.9
O2 Lo P Sply P	5576.3	/ 808.74
O2 Lo P Sply Tank T	25.2	/ 77.3
O2 Lo P Sply Vlv *	OPEN	
O2 Lo P Sply Line T	25.2	/ 77.3
UIA Sply P	244.4	/ 35.44

DEPRESS PUMP

Power Switch	OFF	Emerg Off	--
Enable Light	OFF	Contin Fail	--
Fault Light Status	OFF	Motor Fail	--
(Fail indicator)		EU Fail	--
Speed	L		

FIRE DETECTION

INT ISOLATION State RLS

Node 1 IMV Isol State	RLS
INT Invalid IMV Cmd	--

SMK DETECTION

	Cabin *	* Duct
Obscuration	7.78	31.44
Scatter	0.64	0.80
Pct Trip	18.4	29.9
Fire State	--	--
Mon State	ENA	ENA
Lens Contam	CLEAN	CLEAN
Active BIT	CMPLT	CMPLT
Active BIT Fail	--	--
PBIT / Sctr Fail	-- / --	-- / --
Inval Cmd	--	--

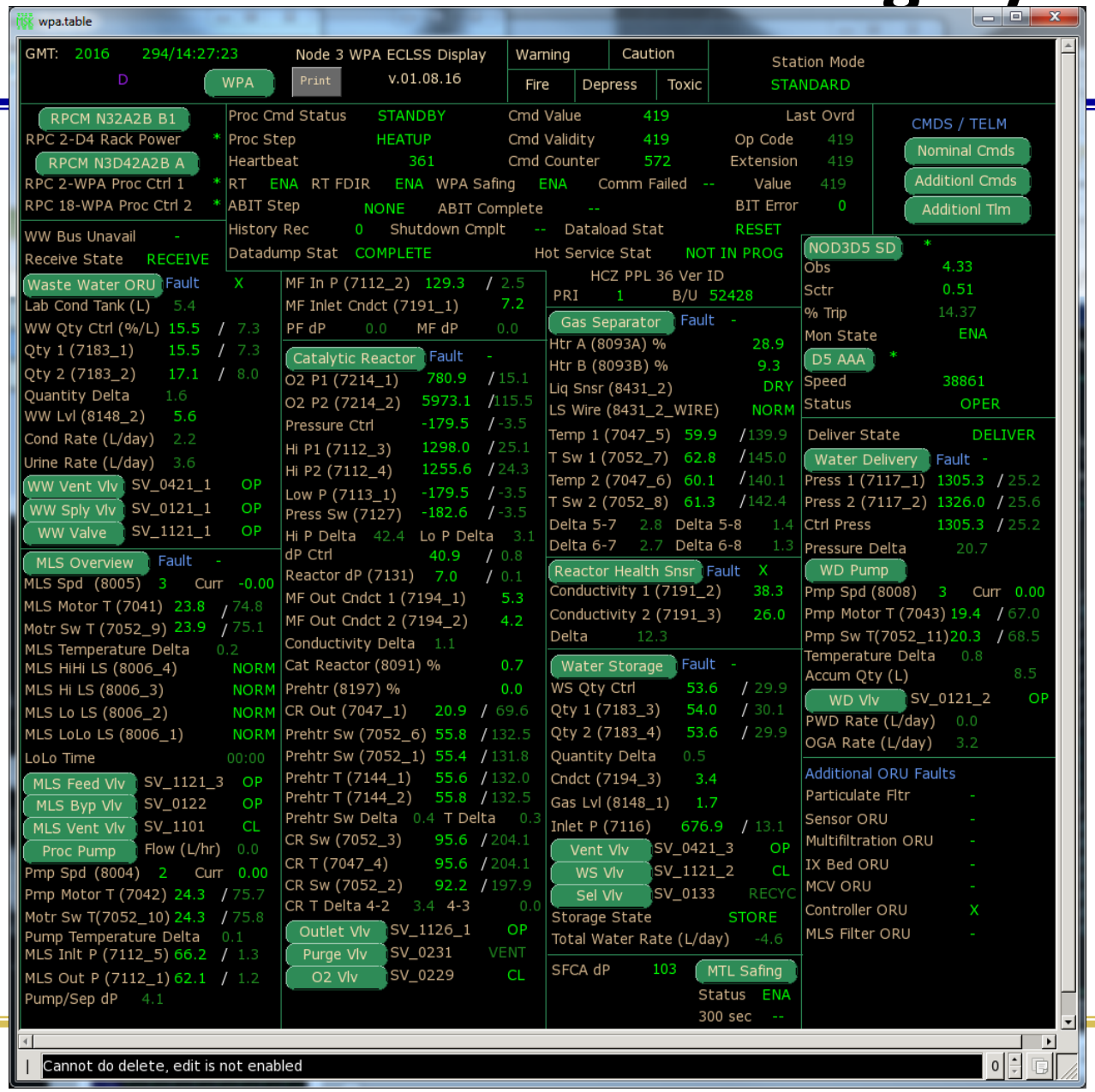
TEMP / HUMIDITY CONTROL

CCAA

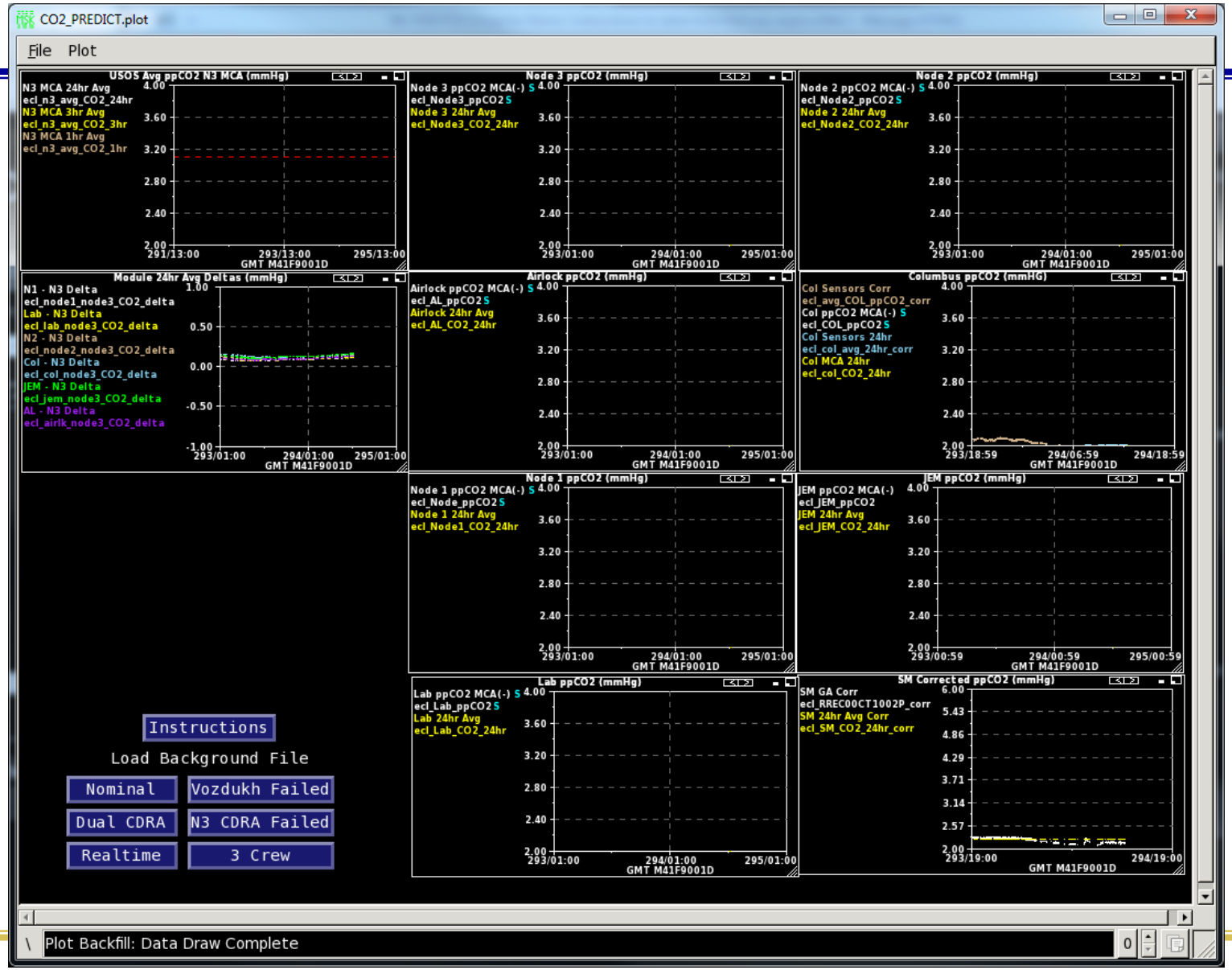
State	ON	
Status	OVRD	
T Contr Alg	1 Set	22.0
In T1	23.9	/ 75.0
In T2	23.8	/ 74.8
TCCV *	21.2	/ 77.5
Out T1	24.6	/ 76.4
Out T2	24.6	/ 76.2
Fan Spd *	3351	
Fan dP	2.63	
HX LS	DRY	
WS LS	0.0	
WS P *	23.7	/ 0.46
WS Spd	5837	
EIB Fail *	--	
Inlet T Fail	--	
Fan Fail	--	
HX LS Fail	--	
WS Fail	--	
LTL In T	9.3	/ 48.8
LTL Out	23.3	/ 74.0

Successfully connected to the ISP server MCCH ethos S:

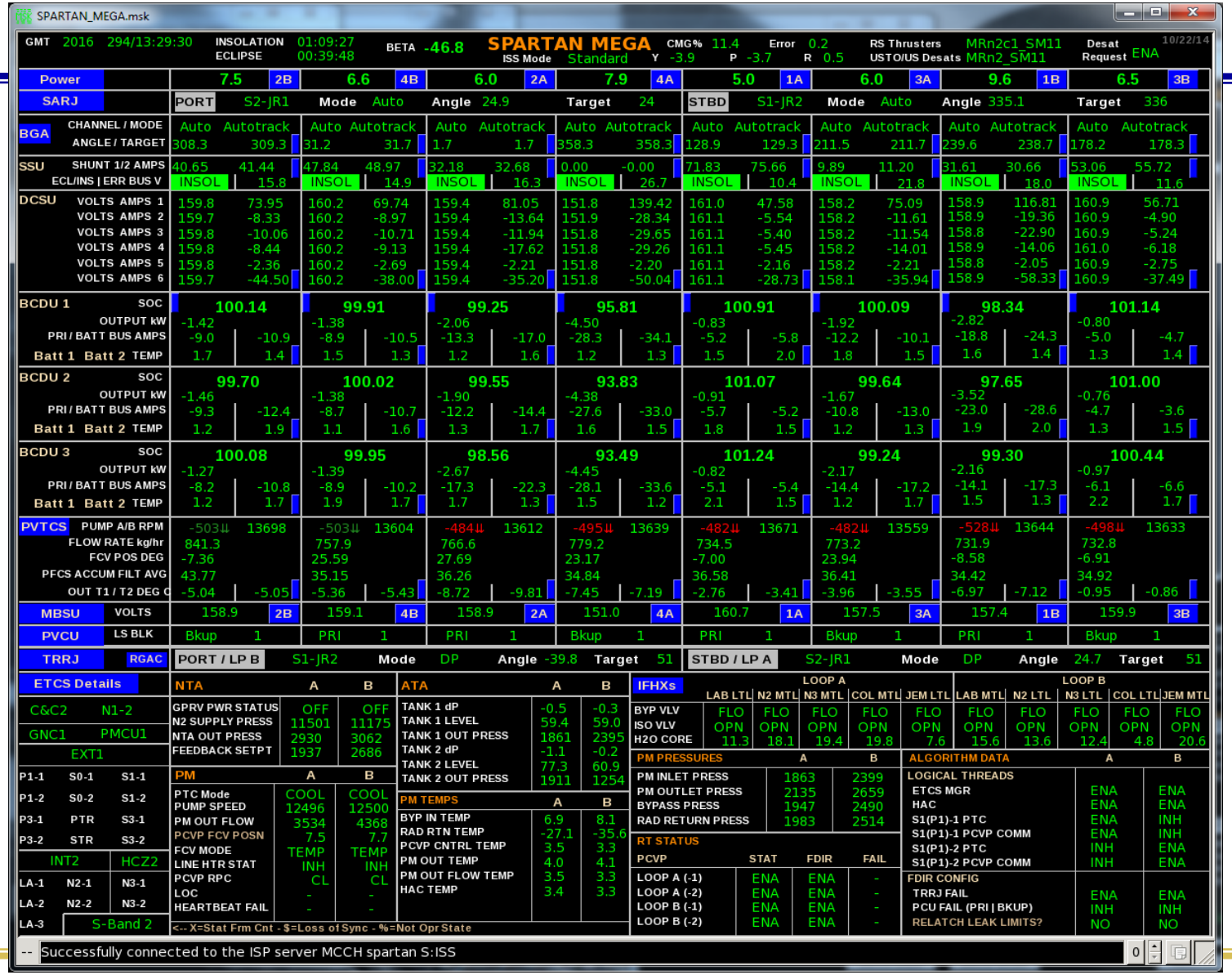
*ETHOS-> MDT PLOTS-> Regen/AR -> WPA



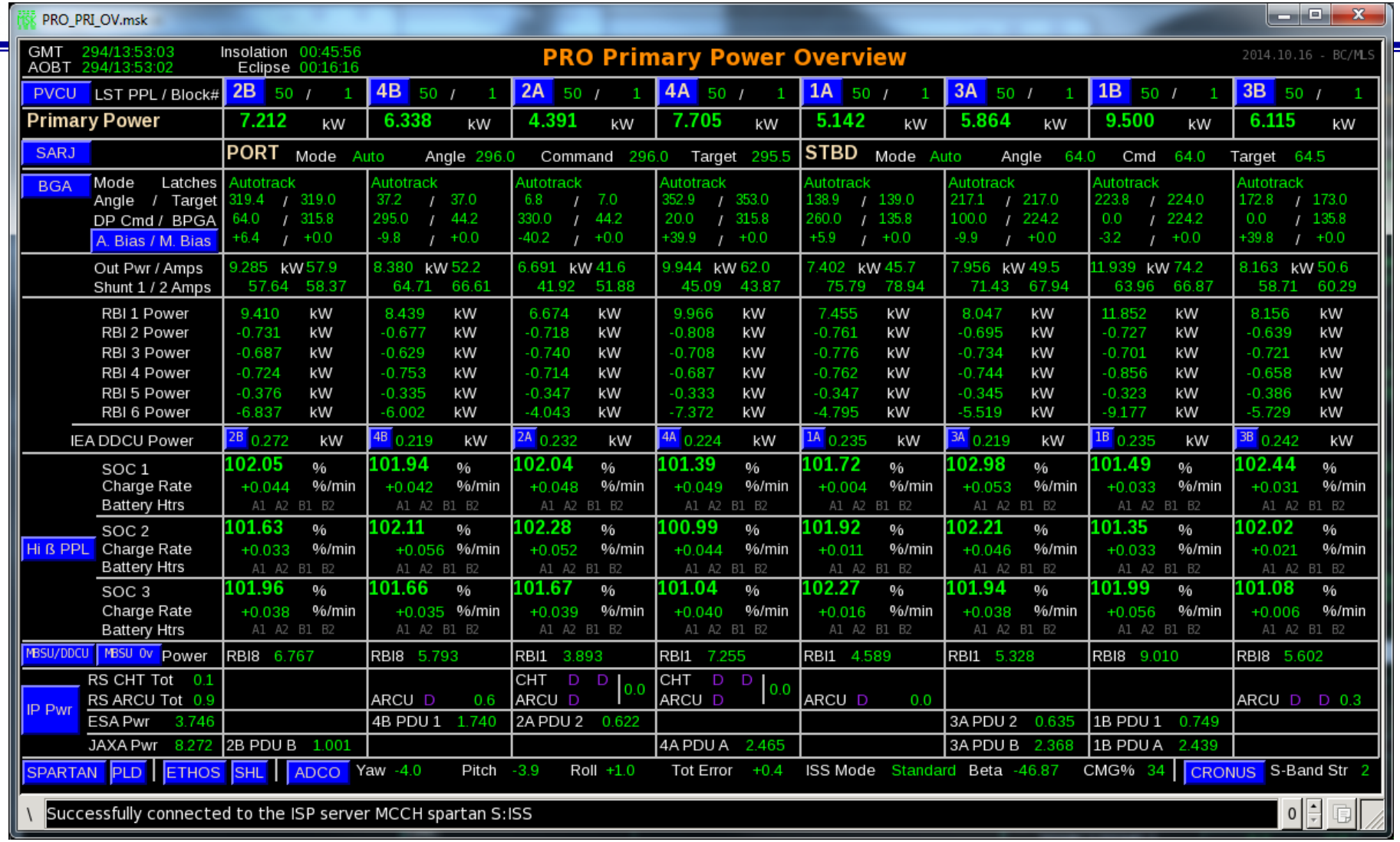
ETHOS-> MDT PLOTS-> OVERVIEW -> CO2 Predicts



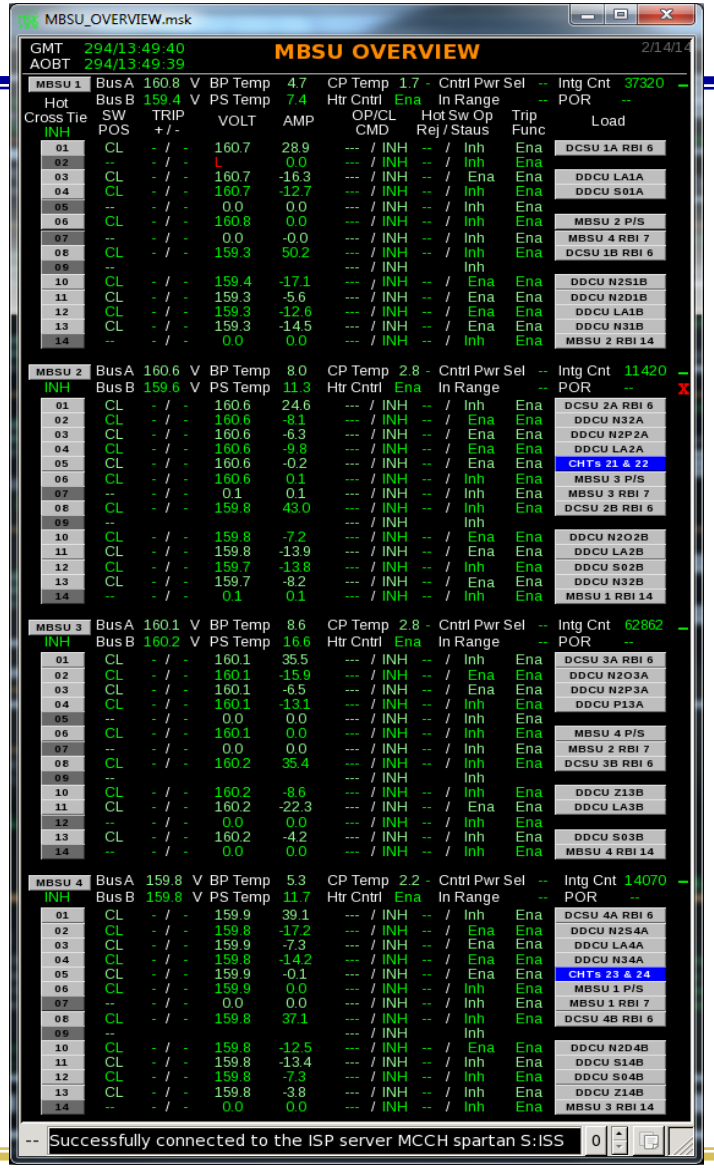
*SPARTAN -> MDTs-> Overview Displays-> SPARTAN Overview



*SPARTAN-> MDTs-> PRO Displays-> Primary Overview



*SPARTAN-> MDTs-> Overview Displays-> MBSU



MBSU_OVERVIEW.msk

GMT 294/13:49:40
AOBT 294/13:49:39

MBSU OVERVIEW

2/14/14

MBSU 1	Bus A 160.8 V	BP Temp 4.7	CP Temp 1.7 -	Cntrl Pwr Sel --	Intg Cnt 37320
Hot Cross Tie INH	Bus B 159.4 V	PS Temp 7.4	Htr Cntrl Ena	In Range --	POR --

	SW POS	TRIP + / -	VOLT	AMP	OP/CL CMD	Hot Sw Op Rej / Staus	Trip Func	Load
01	CL	- / -	160.7	28.9	--- / INH	-- / Inh	Ena	DCSU 1A RBI 6
02	--	- / -	L	0.0	--- / INH	-- / Inh	Ena	
03	CL	- / -	160.7	-16.3	--- / INH	-- / Ena	Ena	DDCU LA1A
04	CL	- / -	160.7	-12.7	--- / INH	-- / Inh	Ena	DDCU S01A
05	--	- / -	0.0	0.0	--- / INH	-- / Inh	Ena	
06	CL	- / -	160.8	0.0	--- / INH	-- / Inh	Ena	MBSU 2 P/S
07	--	- / -	0.0	-0.0	--- / INH	-- / Inh	Ena	MBSU 4 RBI 7
08	CL	- / -	159.3	50.2	--- / INH	-- / Inh	Ena	DCSU 1B RBI 6
09	--				--- / INH	Inh		
10	CL	- / -	159.4	-17.1	--- / INH	-- / Ena	Ena	DDCU N2S1B
11	CL	- / -	159.3	-5.6	--- / INH	-- / Ena	Ena	DDCU N2D1B
12	CL	- / -	159.3	-12.6	--- / INH	-- / Ena	Ena	DDCU LA1B
13	CL	- / -	159.3	-14.5	--- / INH	-- / Ena	Ena	DDCU N31B
14	--	- / -	0.0	0.0	--- / INH	-- / Inh	Ena	MBSU 2 RBI 14

MBSU 2	Bus A 160.6 V	BP Temp 8.0	CP Temp 2.8 -	Cntrl Pwr Sel --	Intg Cnt 11420
INH	Bus B 159.6 V	PS Temp 11.3	Htr Cntrl Ena	In Range --	POR --

	SW POS	TRIP + / -	VOLT	AMP	OP/CL CMD	Hot Sw Op Rej / Staus	Trip Func	Load
01	CL	- / -	160.6	24.6	--- / INH	-- / Inh	Ena	DCSU 2A RBI 6
02	CL	- / -	160.6	-8.1	--- / INH	-- / Ena	Ena	DDCU N32A
03	CL	- / -	160.6	-6.3	--- / INH	-- / Ena	Ena	DDCU N2P2A
04	CL	- / -	160.6	-9.8	--- / INH	-- / Ena	Ena	DDCU LA2A
05	CL	- / -	160.6	-0.2	--- / INH	-- / Ena	Ena	CHTs 21 & 22
06	CL	- / -	160.6	0.1	--- / INH	-- / Inh	Ena	MBSU 3 P/S
07	--	- / -	0.1	0.1	--- / INH	-- / Inh	Ena	MBSU 3 RBI 7
08	CL	- / -	159.8	43.0	--- / INH	-- / Inh	Ena	DCSU 2B RBI 6
09	--				--- / INH	Inh		
10	CL	- / -	159.8	-7.2	--- / INH	-- / Ena	Ena	DDCU N2O2B
11	CL	- / -	159.8	-13.9	--- / INH	-- / Ena	Ena	DDCU LA2B
12	CL	- / -	159.7	-13.8	--- / INH	-- / Inh	Ena	DDCU S02B
13	CL	- / -	159.7	-8.2	--- / INH	-- / Ena	Ena	DDCU N32B
14	--	- / -	0.1	0.1	--- / INH	-- / Inh	Ena	MBSU 1 RBI 14

MBSU 3	Bus A 160.1 V	BP Temp 8.6	CP Temp 2.8 -	Cntrl Pwr Sel --	Intg Cnt 62862
INH	Bus B 160.2 V	PS Temp 16.6	Htr Cntrl Ena	In Range --	POR --

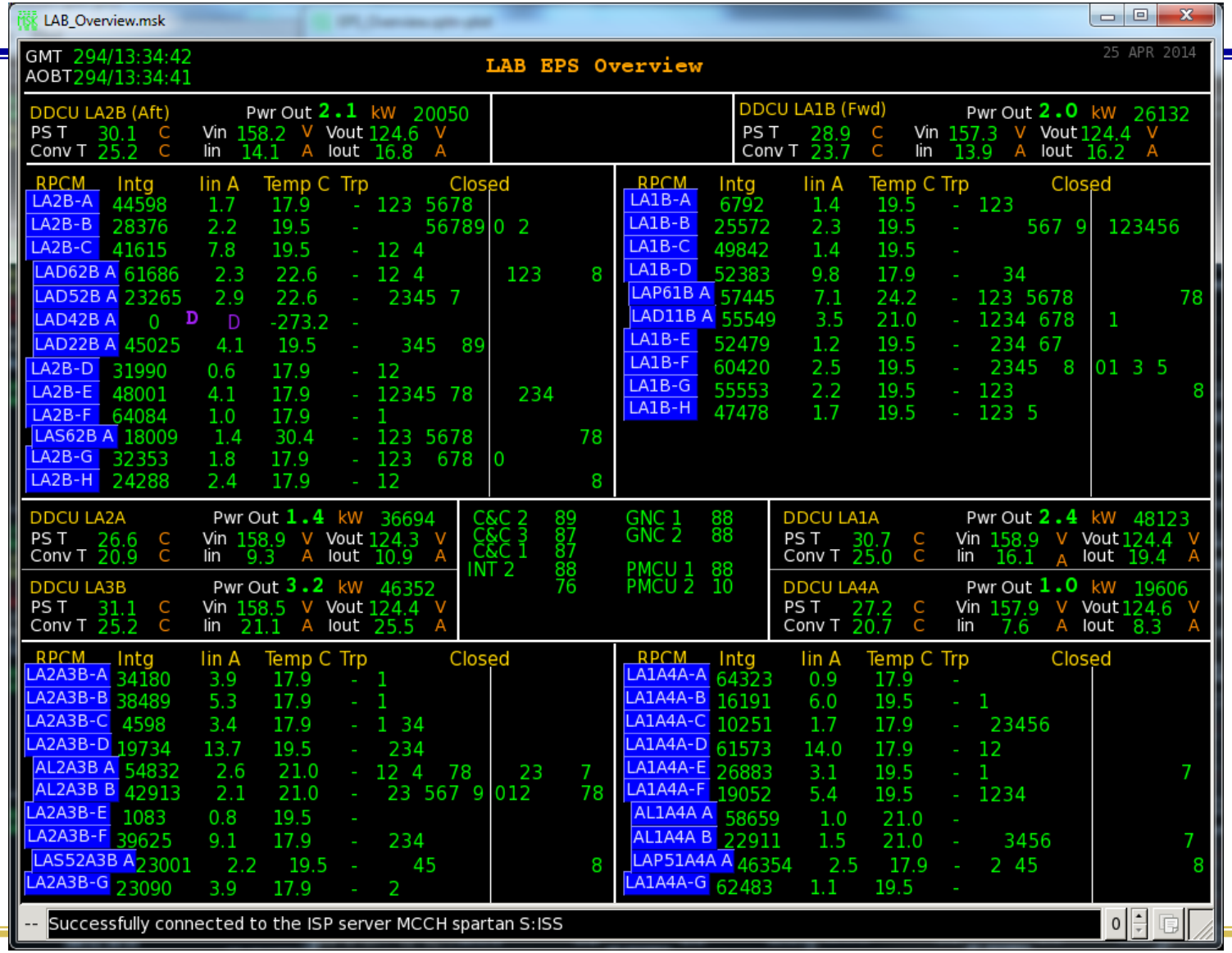
	SW POS	TRIP + / -	VOLT	AMP	OP/CL CMD	Hot Sw Op Rej / Staus	Trip Func	Load
01	CL	- / -	160.1	35.5	--- / INH	-- / Inh	Ena	DCSU 3A RBI 6
02	CL	- / -	160.1	-15.9	--- / INH	-- / Ena	Ena	DDCU N2O3A
03	CL	- / -	160.1	-6.5	--- / INH	-- / Ena	Ena	DDCU N2P3A
04	CL	- / -	160.1	-13.1	--- / INH	-- / Inh	Ena	DDCU P13A
05	--	- / -	0.0	0.0	--- / INH	-- / Inh	Ena	
06	CL	- / -	160.1	0.0	--- / INH	-- / Inh	Ena	MBSU 4 P/S
07	--	- / -	0.0	0.0	--- / INH	-- / Inh	Ena	MBSU 2 RBI 7
08	CL	- / -	160.2	35.4	--- / INH	-- / Inh	Ena	DCSU 3B RBI 6
09	--				--- / INH	Inh		
10	CL	- / -	160.2	-8.6	--- / INH	-- / Inh	Ena	DDCU Z13B
11	CL	- / -	160.2	-22.3	--- / INH	-- / Ena	Ena	DDCU LA3B
12	--	- / -	0.0	0.0	--- / INH	-- / Inh	Ena	
13	CL	- / -	160.2	-4.2	--- / INH	-- / Inh	Ena	DDCU S03B
14	--	- / -	0.0	0.0	--- / INH	-- / Inh	Ena	MBSU 4 RBI 14

MBSU 4	Bus A 159.8 V	BP Temp 5.3	CP Temp 2.2 -	Cntrl Pwr Sel --	Intg Cnt 14070
INH	Bus B 159.8 V	PS Temp 11.7	Htr Cntrl Ena	In Range --	POR --

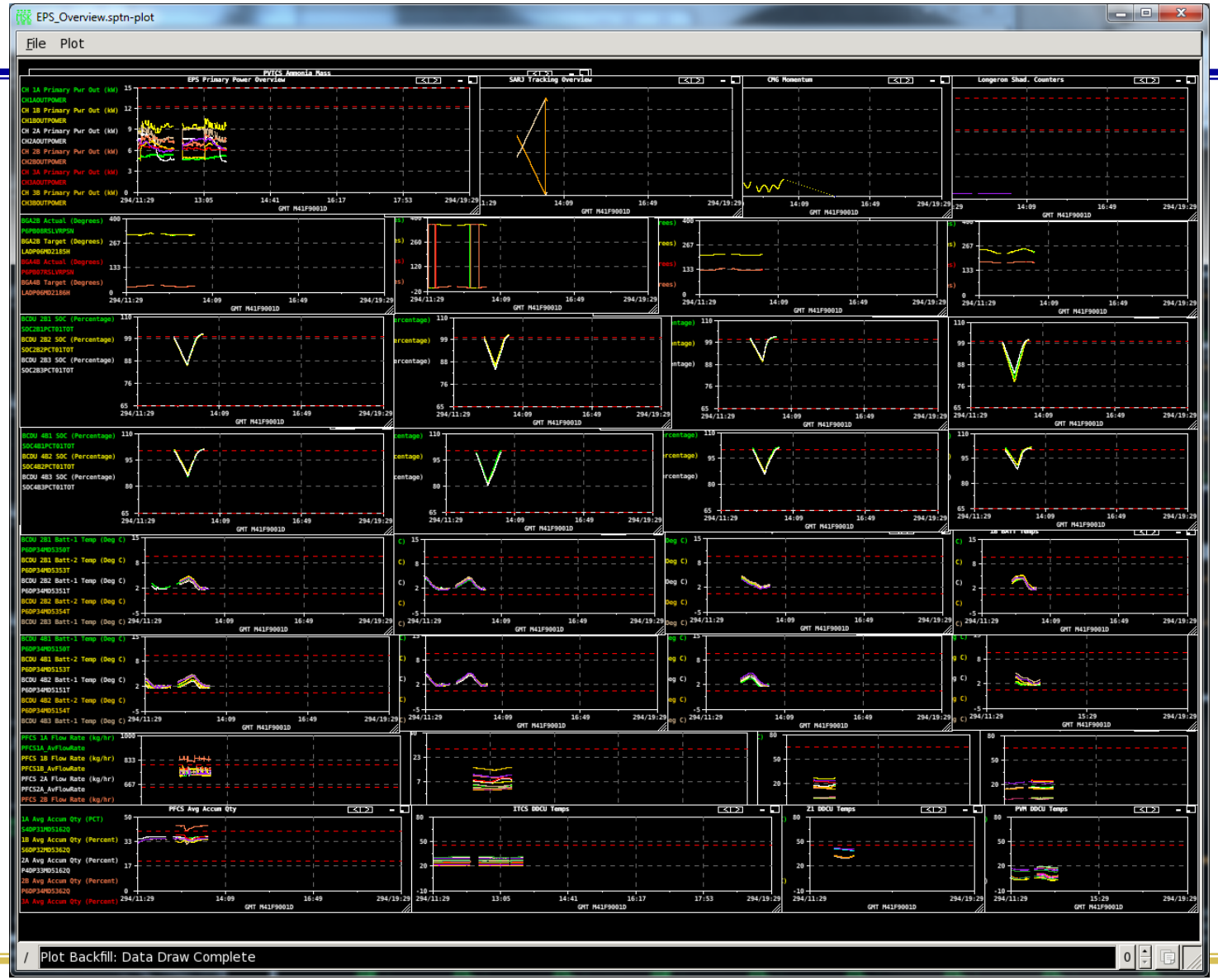
	SW POS	TRIP + / -	VOLT	AMP	OP/CL CMD	Hot Sw Op Rej / Staus	Trip Func	Load
01	CL	- / -	159.9	39.1	--- / INH	-- / Inh	Ena	DCSU 4A RBI 6
02	CL	- / -	159.8	-17.2	--- / INH	-- / Ena	Ena	DDCU N2S4A
03	CL	- / -	159.9	-7.3	--- / INH	-- / Ena	Ena	DDCU LA4A
04	CL	- / -	159.8	-14.2	--- / INH	-- / Ena	Ena	DDCU N34A
05	CL	- / -	159.9	-0.1	--- / INH	-- / Ena	Ena	CHTs 23 & 24
06	CL	- / -	159.9	0.0	--- / INH	-- / Inh	Ena	MBSU 1 P/S
07	--	- / -	0.0	0.0	--- / INH	-- / Inh	Ena	MBSU 1 RBI 7
08	CL	- / -	159.8	37.1	--- / INH	-- / Inh	Ena	DCSU 4B RBI 6
09	--				--- / INH	Inh		
10	CL	- / -	159.8	-12.5	--- / INH	-- / Ena	Ena	DDCU N2D4B
11	CL	- / -	159.8	-13.4	--- / INH	-- / Inh	Ena	DDCU S14B
12	CL	- / -	159.8	-7.3	--- / INH	-- / Inh	Ena	DDCU S04B
13	CL	- / -	159.8	-3.8	--- / INH	-- / Inh	Ena	DDCU Z14B
14	--	- / -	0.0	0.0	--- / INH	-- / Inh	Ena	MBSU 3 RBI 14

-- Successfully connected to the ISP server MCCH spartan S:ISS 0

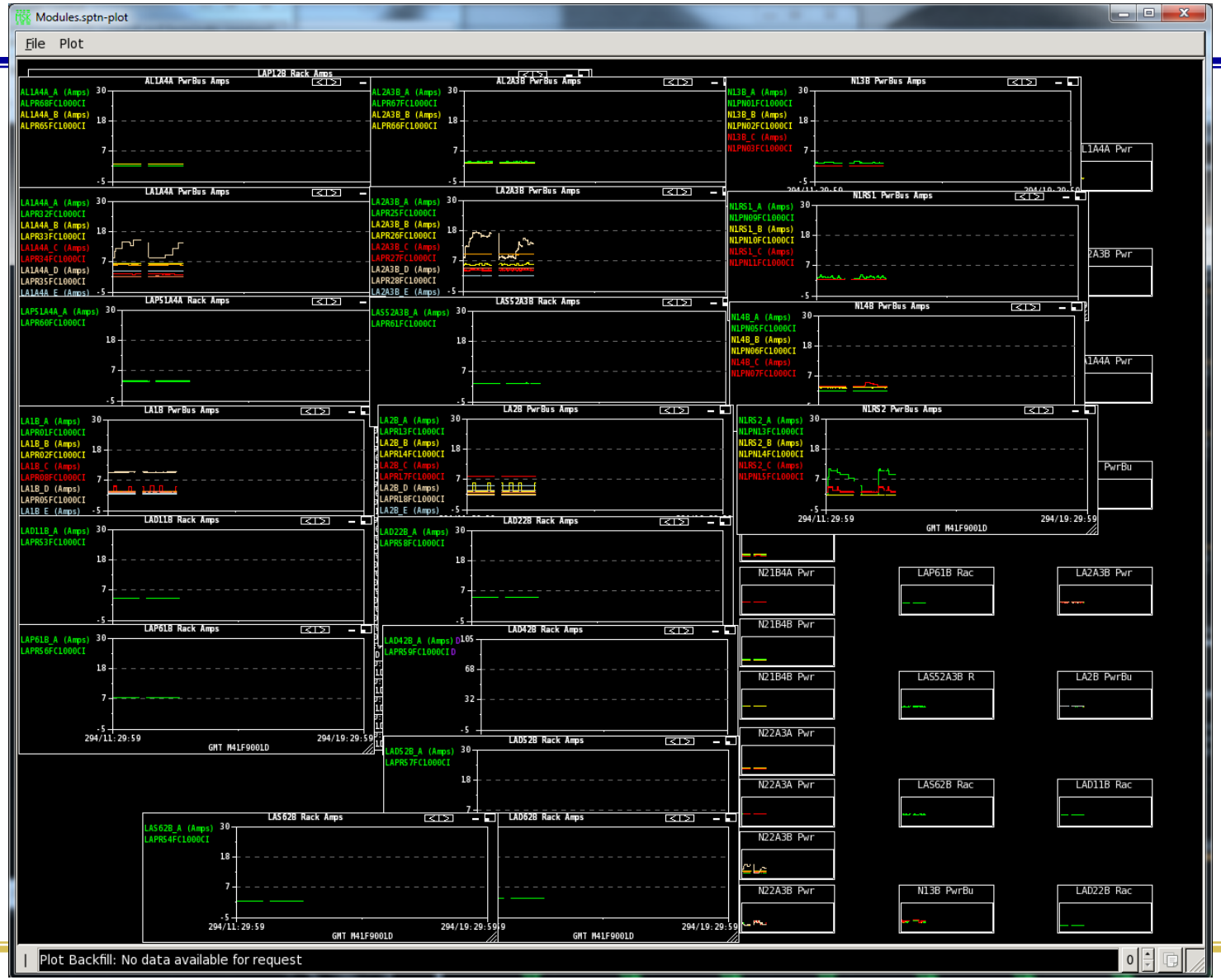
*SPARTAN-> MDTs-> Module Displays-> Lab-> Lab Overview



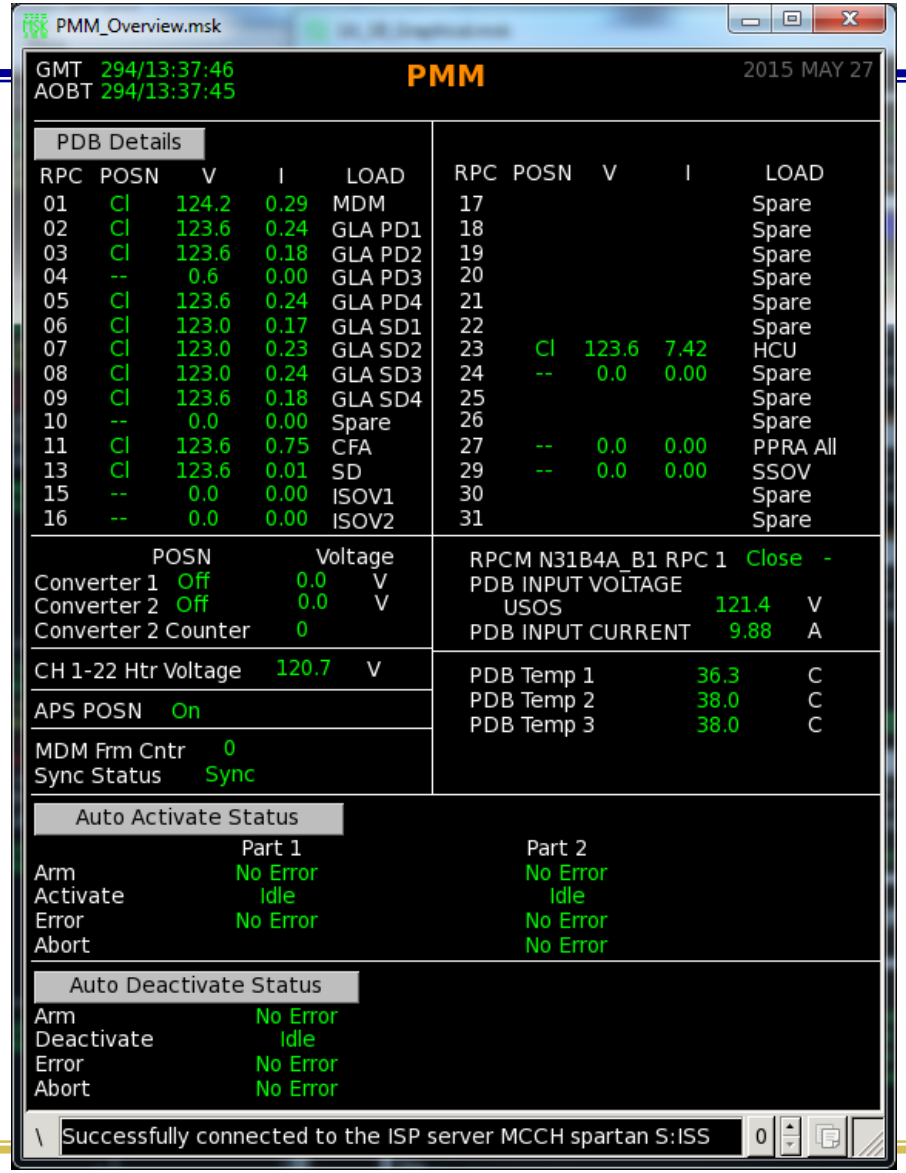
*SPARTAN-> PLOTs-> SPARTAN-> Modules-> EPS Overview



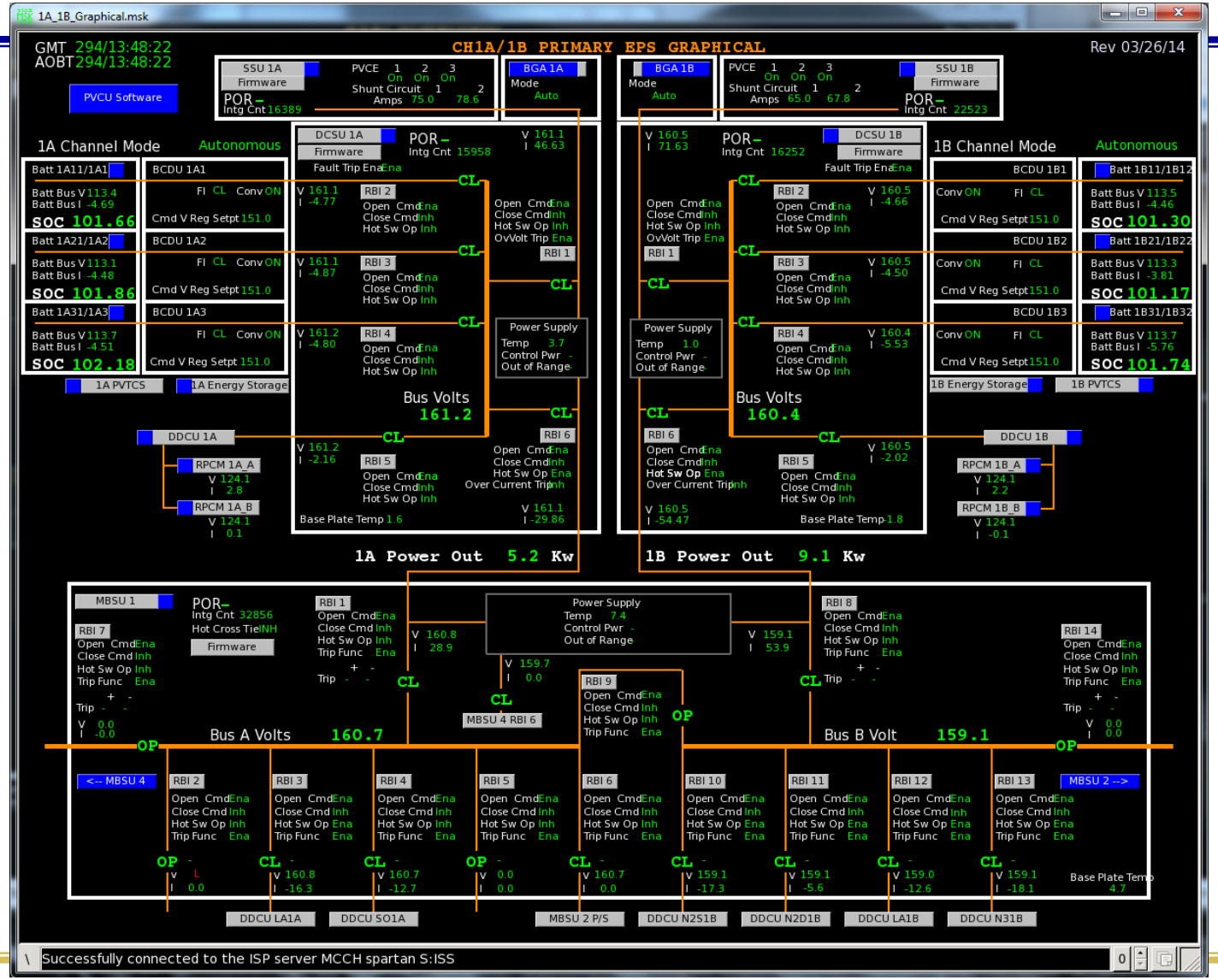
*SPARTAN-> PLOTs-> SPARTAN-> Modules



SPARTAN-> MDTs-> Module Displays-> PMM Overview



SPARTAN-> MDTs-> Overview Displays-> Primary EPS Graphicals-> 1A_1B



SPARTAN-> MDTs-> Overview Displays-> SARJ-> Overview

SARJ_Overview.msk

SARJ

SARJ OVERVIEW

GMT 294/13:50:31

Rev 10/29/14

	FDIR STATES PORT	FDIR STATES STBD
SARJ_M FDIR		
JOINT SHUTDOWN FAIL	ENA	ENA
INADV DLA STATE CHNGE	ENA	ENA
BLIND OPS	ENA	ENA
BLIND OPS TRANS UNSUCC	ENA	ENA
LOWER TIER UNAVAILABLE	ENA	ENA
LOSS OF MONITOR MDM	ENA	ENA
STRING FAIL AUTOTRACK	ENA	ENA
STRING FAIL DP	ENA	ENA
STRING FAIL BLIND	ENA	ENA
XTION TO CHECKOUT	ENA	ENA
JOINT RESOLVER LOSS	ENA	ENA
BLIND OPS TIMEOUT	INH	INH
INADV JOINT ROTATION	INH	INH
AUTO RESTART	INH	INH
SARJ_C FDIR		
DRIVE MOTOR TEMP HIGH	ENA	ENA
RJMC MTR CURRENT HIGH	ENA	ENA
EXCESSIVE JOINT VEL	ENA	ENA
TRACK CNTRL STOP FAIL	ENA	ENA
MDM - RJMC LOC	ENA	ENA
JOINT RESOLVER FAIL	ENA	ENA
MOTOR RESOLVER FAIL	ENA	ENA
ENGA DLA TOOTHCRASH	ENA	ENA
LOCK DLA TOOTHCRASH	ENA	ENA

MDM FRAME COUNTS	
PRIM C&C (2)	89
PRIM EXT (1)	88
PRIM GNC (1)	88
P3-1	86
P3-2	86
S3-1	86
S3-2	86

RPCM FRAME COUNTS	
P31A_A	1376
P32B_A	4898
S31A_A	46676
S32B_A	539

	SARJ INFORMATION PORT STRING 1	PORT STRING 2	STBD STRING 1	STBD STRING 2
SARJ STATUS	S2-JR1		S1-JR2	
LOGICAL THREADS				
RGAC	ENA			
SARJ MANAGER	ENA		ENA	
SARJ CONTROL	ENA	ENA	ENA	ENA
RJMC COMM	ENA	ENA	ENA	ENA
SARJ_M MODE	AUTOTRACK		AUTOTRACK	
SARJ_M CMD PATH	P3-2		S3-1	
SARJ_M APP BUSY	-		-	
SARJ M SEQ STAT	1003		1003	
SARJ_M APP RESPONSE	CMD ACCEPT		CMD ACCEPT	
CMD REJECTED COUNTER	0		0	
SARJ_C CMD POSN SOURCE	ALPHA TGT		ALPHA TGT	
SARJ_C MODE	MONITOR	CMDED	CMDED	MONITOR
SARJ_C APP BUSY	-	-	-	-
SARJ_C APP AVAIL	AVAIL	AVAIL	AVAIL	AVAIL
SARJ C SEQ STAT	502		502	
SARJ_M JOINT ANGLE	305.1		54.9	
JOINT ANGLE SOURCE	JOINT RESOLVER 1		JOINT RESOLVER 2	
JOINT RSLVR ANGLE	305.2	270.0F	39.6F	55.1
JOINT POSN MAR	305.2		54.8	
MOT ACCUM REVS (MAR)	154.3	86.4	211.0	0.3
SARJ NULL POSN	90.0		270.0	
SARJ CMD POSN (EXT)	305.2		54.9	
GNC TARGET	304.7		55.3	
BIAS	0.0		0.0	
LAST ORBIT TARGET BUFFER	FULL	FULL	FULL	FULL
JOINT RSLVR CMDED/ACTUAL	ON / ON	OFF / OFF	OFF / OFF	ON / ON
RJMC RPC POSITION	CLOSED	CLOSED	CLOSED	CLOSED
POWER ON RESET FLAG	-	-	-	-
SARJ MOTION DETAILS				
POSN REQUEST (deg)	305.3		54.8	
JOINT VELOC (VRR) (deg/s)	-0.06		0.06	
DVRR AVG (deg/s^2)	0.000		-0.000	
STOP DISTANCE	162.1		0.0	
APPROX. TIME TO TARGET	00:00		00:00	
GNC				
POINTING VALIDTY	VALID			
TARGET ANGLE VALIDITY	VALID		VALID	
RGAC				
RGAC DATA VALID	VALID			
ORBITAL PERIOD	5544.89			

	DLA/RJMC INFORMATION PORT STRING 1	PORT STRING 2	STBD STRING 1	STBD STRING 2
CMDED DLA MOTOR	DRIVE	DRIVE	DRIVE	DRIVE
DLA MOTOR STATUS	NONE	DRIVE	DRIVE	NONE
DLA 1 CALC POSN	Neutral	Neutral	Engage	Engage
DLA SWITCH POS	NEUTRAL	NEUTRAL	ENGAGE	ENGAGE
POSITION V DC	3.12	3.12	3.72	3.72
DLA 2 CALC POSN	Engage	Engage	Neutral	Neutral
DLA SWITCH POS	ENGAGE	ENGAGE	NEUTRAL	NEUTRAL
POSITION V DC	3.72	3.73	3.13	3.13
VELOCITY STATUS				
ENG/LK MOTOR (amp)	0.00	0.00	0.00	0.00
DRIVE MTR STEP (amp)	0.00	0.00	0.00	0.00
DRIVE MOTOR (edeg/s)	0.0	273.2	-278.7	0.0
MTR VEL (amp or edeg/s)	0.00	272.96	-278.21	-0.00
STEPPER RATE (Hz)	8.11	8.11	8.11	8.11
REMAIN STEPPER DIST	-1	-1	-1	-1
STEP MOT Circuit Driving	-	-	-	-
RJMC (PA) RSS CURRENT	0.045	0.191	0.124	0.007
RJMC (PA) RSS VOLTAGE	0.53	6.34	8.49	0.22
RJMC ENSEMBLE VOLT	-0.27	7.93	-7.04	-0.68
MTR RES CURRENT	0.008	0.010	0.010	0.010
MTR RES VOLTAGE	6.89	6.91	6.90	6.90
MTR RES RSS VOLTAGE	2.09	2.32	2.29	2.25
MTR RES SPEED	0.00	203.12	-214.84	-31.25
JOINT RSLVER CURRENT	0.183	0.002	0.001	0.192
JOINT RSLVER VOLT	6.94	0.00	0.00	6.96
JOINT RSLVER RSS VOLT	2.88	0.00	0.00	2.79
TEMPERATURES (DEG C)	PORT		STBD	
RJMC TEMP	15.2	16.7	10.7	9.5
DLA DRIV MTR TEMP	3.8	4.0	13.4	12.7
WDG A TEMP	4.0	2.9	12.3	11.5
WDG B TEMP	4.1	2.9	12.3	11.4
UTA TEMPS	P3-1		S3-1	
TEMP 1/TEMP 2	8.4	9.7	10.4	8.1
TEMP 3/TEMP 4	9.4	8.6	8.4	10.7
TEMP 5/TEMP 6	17.2	9.9	7.4	7.0
INBOARD BEARINGS	P3-1		S3-1	
TEMP 1/TEMP 2	-0.4	-0.8	13.9	14.5
TEMP 3/TEMP 4	3.3	2.9	7.4	19.3
TEMP 5/TEMP 6	7.8	5.8	10.4	12.0
OUTBOARD BEARINGS	PVCU 2A		PVCU 1A	
TEMP 1/TEMP 2	-0.0	-4.5	15.3	7.3
TEMP 3/TEMP 4	-0.1	7.3	14.9	24.1
TEMP 5/TEMP 6	-2.9	1.1	10.1	14.1
TEMP 7	2.1		13.8	

-- Successfully connected to the ISP server MCCH spartan S:ISS